

APR 26 2007

Application Number: 10/611,842  
Filed: 07.01.2003Office Action Date: 02.01.2007  
Amendment Date: 4/26/2007**Listing of Claims:***This listing of claims replaces all prior versions and listings of claims in the application.*

1. (Previously Presented) A bent tube having a bend configuration comprising:
  - a curve extending between first and second ends;
  - a portion of the curve being a circular arc; and
  - a clothoid transition portion extending from the second end toward the circular arc having a radius of curvature decreasing from zero curvature to a radius of curvature of the circular arc at a point of integration.
2. (Canceled)
3. (Previously Presented) The tube of claim 1 including a second transition portion extending from the arc portion toward the first end having a curvature decreasing from the bending radius of the arc to the zero curvature.
4. (Original) The tube of claim 1 wherein the curve subtends an angle of 90 degrees.
5. (Original) The tube of claim 1 wherein the curve subtends an angle greater than 90 degrees.
6. (Previously Presented) The tube of claim 1 wherein the curve subtends an angle less than 90 degrees.
7. (Canceled)
8. (Canceled)

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9. (Currently Amended) A draw die for tube bending, the die having a bending surface configuration comprising:

a curve extending between first and second ends;

a portion of the curve being a circular arc; and

a clothoid transition portion extending from the second end toward the circular arc having a radius of curvature decreasing from zero curvature to a radius of curvature of the circular arc at a point of integration; and,

The draw die of claim 7

including a second transition portion extending from the arc portion toward the first end having a curvature decreasing from the bending radius of the arc to the zero curvature.

10. (Currently Amended) The draw die of claim 9 claim 7 wherein the curve subtends an angle of 90 degrees.

11. (Currently Amended) The draw die of claim 9 claim 7 wherein the curve subtends an angle greater than 90 degrees.

12. (Currently Amended) The draw die of claim 9 claim 7 wherein the curve subtends and an angle less than 90 degrees.

13. (Previously Presented) The bent tube of claim 1, wherein the shape and arc length of the transition portion is defined by a length and an angle of the portion of the curve being the circular arc.

14. (Currently Amended) The draw die of claim 9 claim 7, wherein the shape and arc length of the transition portion is defined by a length and an angle of the portion of the curve being the circular arc.